Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
DIRECTV Enterprises, LLC	)	
	)	File Nos. SAT-MOD-20050513-00100
	)	SAT-MOD-20050513-00101
Applications for Modification of Assigned Orbital	)	
Location of the the DIRECTV 8 (K) Ka-Band Payload and DIRECTV 8 (D) DBS	)	Call Signs: S2132; S2632
Payload from 100.85º W.L. to 100.75º W.L.	)	
	)	

ORDER

Adopted: October 07, 2005 **Released:** October 07, 2005

By the Deputy Chief, Satellite Division, International Bureau:

I. INTRODUCTION

1. By this Order, we modify the authorizations of DIRECTV Enterprises, LLC (DIRECTV) for its Direct Broadcast Satellite (DBS) space station and Fixed Satellite Service (FSS) Ka-band[1] space station[2] on the DIRECTV 8 Geostationary Satellite Orbit (GSO) satellite to allow for relocation of the DIRECTV 8 satellite from the 100.85º W.L. orbital location[3] to the 100.75º W.L. orbital location.[4] In doing so, as explained below, we decline to condition this grant on DIRECTV's successful coordination of the DIRECTV 8 satellite with the satellites of Mobile Satellite Ventures Subsidiary, LLC (MSV) at the nominal 101º W.L. location, as sought by MSV.[5] Grant of these applications will result in the efficient deployment of orbital resources and reduce the stationkeeping burden on DIRECTV.

[1] As used in this Order, the term "Ka-band" refers to the 18.3-18.8 GHz (space-to-Earth), 19.7-20.2 GHz (space-to-Earth), 28.35-28.6 GHz (Earth-to-space), and 29.25-30.0 GHz (Earth-to-space) frequency bands.

[2] As used in this Order, the term "space station" has the meaning given in the International Telecommunication Union (ITU) Radio Regulations, *i.e.,* one or more transmitters, or receivers, or a combination of transmitters and receivers necessary for carrying on a radiocommunication service, and located on an object which is beyond, or is intended to go beyond, the major portion of the Earth's atmosphere. ITU Radio Regulations Articles 1.61 and 1.64; *see also* 47 C.F.R. § 25.201.

[3] DIRECTV 8 was launched in May 2005. DIRECTV was granted authority, pursuant to a Special Temporary Authority (STA), to conduct in-orbit testing of the DIRECTV 8 satellite's DBS payload at the 138º W.L. location and upon completion of the test to return the satellite to its assigned location. *See* International Bureau, Policy Branch Information: Actions Taken, *Public Notice,* Report No. SAT-00317 (rel. August 26, 2005) (granting File No. SAT-STA-20050624-00136).

[4] The 0.1º change in orbit location corresponds to a minimum horizontal separation of about 73.6 kilometers, or 45.7 statute miles.

[5] *See* Comments of Mobile Satellite Ventures Subsidiary LLC, filed May 31, 2005 (MSV Comments).

II. BACKGROUND

2. In 2004, the Commission authorized DIRECTV to operate two separate space stations on the DIRECTV 8 satellite at the 100.85º W.L. orbital location. One authorization is for a DBS space station (Call Sign S2632) and one is for a Ka-band FSS space station (Call Sign S2132).[6] The DBS space station is authorized to operate on the 16 odd-numbered channels between 1 and 31 inclusive in the 12.2–12.7 GHz (space-to-Earth) and 17.3–17.8 GHz (Earth-to-space) frequency bands. The Ka-band FSS space station is authorized to operate in the 18.3-18.8 GHz (space-to-Earth), 19.7-20.2 GHz (space-to-Earth), 28.35-28.6 GHz (Earth-to-space), and 29.25-30.0 GHz (Earth-to-space) frequency bands. Under its authorization, DIRECTV 8 is assigned to the 100.85º W.L. orbital location with ±0.05º longitudinal stationkeeping, *i.e.*, DIRECTV 8 currently has an authorized longitudinal range of 100.80º W.L. to 100.90º W.L.

3. Six in-orbit satellites are authorized to operate at assigned locations within 0.25 degrees of the 101º W.L. location, including DIRECTV 8. Specifically, MSV's in-orbit satellite, AMSC-1, is authorized to operate at the 100.95º W.L. orbital location with ±0.05º longitudinal stationkeeping.[7] AMSC-1 therefore has an authorized longitudinal range of 100.90º W.L. to 101.00º W.L. DIRECTV's DIRECTV 1R satellite is authorized at the 100.85º W.L. orbital location with ±0.05º longitudinal stationkeeping, *i.e.*, DIRECTV 1R currently has an authorized longitudinal range of 100.80º W.L. to 100.90º W.L.[8] DIRECTV's DIRECTV 4S satellite is authorized at the 101.20º W.L. orbital location with ±0.05º longitudinal stationkeeping, thus DIRECTV 4S has an authorized longitudinal range of 101.15º

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[6] *See* International Bureau, Policy Branch Information: Actions Taken, *Public Notice,* Report No. SAT-00256 (rel. November 5, 2004) (granting File Nos. SAT-RPL-20040630-00127 (DBS space station) and SAT-MOD-20040630-00128 (Ka-band space station)). The November 5, 2004 actions authorized the DIRECTV 8 satellite to operate at the 100.85º W.L. orbital location. Subsequent modifications and Special Temporary Authorizations (STAs) relating to DIRECTV 8 did not affect the authorized orbital location. *See* International Bureau, Policy Branch Information: Actions Taken, *Public Notice,* Report No. SAT-00317 (rel. August 26, 2005) (granting File No. SAT-STA-20050624-00136 for in-orbit testing); Report No. SAT-00308 (rel. July 15, 2005) (granting File Nos. SAT-STA-20050526-00108 (DBS space station) and SAT-STA-20050526-00109 (Ka-band space station)); Report No. SAT-00302 (rel. June 24, 2005) (granting File Nos. SAT-STA-20050616-00126 (DBS space station) and SAT-STA-20050616-00126 (Ka-band space station)); Report No. SAT-00294 (rel. May 27, 2005) (granting File Nos. SAT-STA-20050506-00095 (DBS space station) and SAT-STA-20050506-00096 (Ka-band space station)). The origin of the DIRECTV 8 satellite dates to 1997, when the Commission authorized DIRECTV's predecessor-in-interest, Hughes Communications Galaxy, Inc., to launch and operate a GSO FSS satellite system. *See* Hughes Communications Galaxy, Inc., *Order and Authorization,* 13 FCC Rcd 1351(1997), *modified by* Hughes Communications Galaxy, Inc., *Order and Authorization,* 16 FCC Rcd 2470 (2001), *further modified by* Hughes Communications Galaxy, Inc., *Order and Authoriztion,* 16 FCC Rcd 12627 (2001). In April 2002, the Commission authorized the *pro forma* assignment of this license from Hughes Communications Galaxy, Inc. to Hughes Network Systems, Inc. *See* File No. SAT-ASG-20011204-00110. In May 2004, the Commission authorized the *pro forma* assignment of this license from Hughes Network Systems to DIRECTV. *See* File No. SAT-ASG-20040520-00101.

[7] *See* International Bureau, Policy Branch Information: Actions Taken, *Public Notice,* 19 FCC Rcd 20460 (rel. August 27, 2004) (Granting File No. SAT-MOD-20040623-00120).

[8] *See* International Bureau, Policy Branch Information: Satellite Space Applications Accepted for Filing, *Public Notice,* Report No. SAT-00123, File No. SAT-STA-20020910-00172 (rel. September 27, 2002). The DIRECTV 1R satellite was relocated in conjunction with the relocation of the DIRECTV 3 satellite to enable DIRECTV 1R to carry the traffic assigned to DIRECTV 3. DIRECTV subsequently filed a modification application to make these changes permanent. *See* File No. SAT-MOD-20030205-00032. This application, except for the portion dealing with the request to redesignate the orbital location for DIRECTV 1R, was withdrawn by DIRECTV on March 9, 2004. *See* Letter from James R. Butterworth, Senior Vice President, DIRECTV, to Thomas S. Tycz, Chief, Satellite Division, International Bureau, dated March 9, 2004. *See also* http://svartifoss2.fcc.gov/servlet/ib.page.FetchAttachment?attachment_key=374272 for grant-stamped application to move DIRECTV 1R.

W.L. to 101.25º W.L. SES Americom has a satellite, AMC-4, that is authorized to operate at the 101.00º W.L. orbital location with ±0.05º longitudinal stationkeeping, thus AMC-4 has an authorized longitudinal range of 101.05º W.L. to 100.95º W.L.[9] DIRECTV's DIRECTV 2 satellite is authorized to operate at the 100.8º W.L. orbital location. Recently, DIRECTV requested and received an STA to move DIRECTV 2 to 100.6º W.L. in anticipation of transferring traffic from DIRECTV 2 to DIRECTV 8.[10] In addition to the in-orbit satellites, one satellite is authorized to operate within 0.25 degrees of the 101º W.L. orbital location but is not yet launched. Specifically, on May 23, 2005, the Commission granted MSV's application for MSV-1 to be located at the 101.0º W.L. orbital location with ±0.05º longitudinal stationkeeping, thus MSV-1 has an authorized longitudinal range of 100.95º W.L. to 101.05º W.L. The MSV-1 satellite is expected to be launched in 2010. Other applications to launch and operate satellites at assigned locations within 0.25 degrees of the 101º W.L. orbital location remain pending at the Commission.[11]

4. On May 13, 2005, DIRECTV filed two applications – one for each space station – seeking authority to relocate the DIRECTV 8 satellite from the 100.85º W.L. location to the 100.75º W.L. location.[12] DIRECTV's applications were placed on public notice as accepted for filing on June 10, 2005.[13] On May 31, 2005, MSV filed comments requesting us to condition grant of the DIRECTV 8 relocation upon DIRECTV's successful coordination of DIRECTV 8 with MSV's satellites at the same orbital location.[14] On September 22, 2005, DIRECTV filed an *ex parte* letter stating that such a condition is without precedent.[15] DIRECTV also stated that because the DIRECTV 8 satellite will replace another DIRECTV satellite licensed to operate at the nominal 101º W.L. orbital location, there will be no increase in congestion at this orbital location.[16] On September 30, 2005, MSV filed an *ex parte* letter in response to

[9] *See* Assignment of Orbital Locations to Space Stations in the Domestic Fixed-Satellite Service and the Applications of GE American Communications, Inc., *Order and Authorization,* 15 FCC Rcd 3385 (1999) (*AMC-4 Authorization Order*) (granting File No. SAT-MOD-19981023-00076 for the 101.00º W.L. orbital location). Subsequent modifications and STAs relating to AMC-4 did not affect the regularly authorized orbital location. *See* International Bureau, Policy Branch Information: Actions Taken, *Public Notice,* Report No. SAT-00194 (rel. February 23, 2004) (granting File No. SAT-STA-20030626-00118); Report No. SAT-00128 (rel. November 15, 2002) (granting File No. SAT-MOD-20021108-00206).

[10] *See* International Bureau, Policy Branch Information: Actions Taken, *Public Notice,* Report No. SAT-00323 (rel. September 30, 2005). We anticipate that DIRECTV will file a further modification with respect to DIRECTV 2 to locate it near the 101º W.L. location as an in-orbit spare or to move it to another location.

[11] International Bureau, Policy Branch Information: Satellite Space Applications Accepted for Filing, *Public Notice,* Report No. SAT-00288 (rel. April 29, 2005) (accepting File No. SAT-RPL-20050322-00070 for filing) (Application of DIRECTV for Authority to Launch and Operate DIRECTV 9S, a Direct Broadcast Satellite, at 101º W.L.); File Nos. SAT-LOA-19970605-00050 (application to operate in the 17 GHz BSS band); SAT-LOA-20020322-00033 (application to operate in the 17 GHz BSS band). The 17 GHz BSS applications have not yet been accepted for filing.

[12] File Nos. SAT-MOD-20050513-00101 (for DBS authorization) and SAT-MOD-20050513-00100 (for Ka-band authorization). The applications are substantively identical, therefore, we will refer to the two applications collectively as the "Application" or the "DIRECTV Application."

[13] *See* International Bureau, Policy Branch Information: Satellite Space Applications Accepted for Filing, *Public Notice*, Report No. SAT-00297 (rel. June 10, 2005).

[14] MSV Comments at 3.

[15] Letter to Marlene H. Dortch, Secretary, Federal Communications Commission, from William M. Wiltshire, Counsel for DIRECTV Enterprises, LLC, dated September 22, 2005 (DIRECTV Ex Parte Letter).

[16] *Id.* at 2.

DIRECTV's letter.[17] MSV states that the Commission should make it clear that launch and operation of the new DIRECTV satellite prior to launch and operation of MSV's next-generation satellite does not provide DIRECTV with greater rights than MSV to operate at a given location in the orbital arc.[18]

III. DISCUSSION

5. DIRECTV requests authority to reposition the DIRECTV 8 satellite from the 100.85º W.L. orbital location to the 100.75º W.L. orbital location. DIRECTV indicates that the requested relocation will enable it to operate its DIRECTV 8 satellite in a stationkeeping volume that does not overlap with any of the other space stations operating at the nominal 101º W.L. orbital location.[19] We conclude that grant of the requested modification will serve the public interest, convenience and necessity because it will result in the efficient deployment of orbital resources.

6. Grant of DIRECTV's Application will result in DIRECTV 8 having a longitudinal range of 100.70º W.L. to 100.80º W.L. This will simplify stationkeeping operations for DIRECTV 1R and DIRECTV 8 by eliminating the overlap between the stationkeeping volumes. We also note that because the DIRECTV 8 satellite is a replacement for the DIRECTV 2 satellite, operation of DIRECTV 8 at the 100.75º W.L. location will not increase congestion at the nominal 101º W.L. orbital location.[20] With respect to MSV's concerns, we note that grant of this request will result in a minimum angular separation of 0.1º between DIRECTV 8 at its requested location and AMSC-1. This would presumably obviate any stationkeeping concern of MSV at this location with respect to DIRECTV 8. This would also hold true with respect to the authorized but not launched MSV-1 satellite. Thus, grant of DIRECTV's application will increase the separation between the DIRECTV 8 satellite and MSV's current and future authorized satellites at the nominal 101º W.L. orbital location.

7. With respect to MSV's proposed condition, we note as an initial matter that the authorization for the MSV-1 satellite was not conditioned upon successful coordination of its satellite with those of DIRECTV at the same location. Therefore, adopting the condition proposed by MSV would constitute inconsistent treatment of the two licensees.[21] We note, however, that parties licensed at a particular orbital location are expected to coordinate with other parties licensed at the same location to avoid in-orbit collisions.[22] Thus, we will not impose the condition requested by MSV regarding adjacent satellite

[17] Letter to Marlene H. Dortch, Secretary, Federal Communications Commission, from Jennifer A. Manner, Vice President, Regulatory Affairs, Mobile Satellite Ventures LP, dated September 22, 2005.

[18] *Id.*

[19] DIRECTV Application at 1-3.

[20] *See* DIRECTV Ex Parte Letter at 2.

[21] *Id.* at 1.

[22] *See* Mitigation of Orbital Debris, *Second Report and Order,* 19 FCC Rcd 11567 (2004) (*Orbital Debris 2nd Report and Order)*. In the *Orbital Debris 2nd Report and Order,* the Commission concluded that, while the choice of orbital regimes is best left to the discretion of operators, in some instances the public interest would be served by a detailed discussion of how operators would avoid potential collisions between operational spacecraft with overlapping stationkeeping volumes. *Id.* at paras. 49-50. For example, where operators proposed to co-locate multiple satellites at the same geostationary orbital location, the Commission required operators to state what measures will be taken to prevent collisions. *Id.* at para. 51. The Commission noted that, although it is possible to successfully locate multiple satellites at a single location and within the same stationkeeping volume, such arrangements require real-time coordination that must be disclosed to the Commission. *Id.* The record reflects that DIRECTV, MSV, and SES Americom have held discussions concerning the current arrangement of satellites at the 101º W.L. orbital location. DIRECTV Ex Parte Letter at 1. We note that should a coordination arrangement between the licensees result in parameters not consistent with the authorized parameters for any space station, we expect the licensee of that space station to file an appropriate modification request prior to implementation of that agreement. Operations not consistent with those authorized are subject to enforcement action.

coordination on DIRECTV and will, as is our normal practice, rely on the operators to coordinate in good faith.[23]

IV. CONCLUSION AND ORDERING CLAUSES

8. Accordingly, IT IS ORDERED that, the request of DIRECTV Enterprises LLC to modify the assigned orbital location of its DIRECTV 8 satellite from the 100.85º W.L. orbital location to the 100.75º W.L. orbital location, File Nos. SAT-MOD-20050513-00101 (Call Sign S2632) and SAT-MOD-20050513-00100 (Call Sign S2132), IS GRANTED, subject to the following conditions:

a. DIRECTV Enterprises, LLC shall coordinate all drift orbit DBS and Telemetry, Tracking, and Control operations with other potentially affected in-orbit operators.

b. During the relocation of the DIRECTV 8 satellite operations shall be on a non-harmful interference basis, meaning that DIRECTV Enterprises, LLC shall not cause interference to, and shall not claim protection from interference caused to it by any other lawfully operating satellites.

c. In the event that any harmful interference is caused as a result of operations during the relocation of the DIRECTV 8 satellite, DIRECTV Enterprises, LLC, shall cease operations immediately upon notification of such interference and shall inform the Commission immediately, in writing, of such an event.

d. All of the originally authorized terms, conditions, and technical specifications of the DIRECTV 8 DBS space station (Call Sign S2632) and FSS space station (Call Sign S2132), except for the authorized orbital location, remain in effect.

9. IT IS FURTHER ORDERED that DIRECTV Enterprises, LLC has 30 days from the date of the release of this order to decline this authorization as conditioned. Failure to respond within that period will constitute formal acceptance of the authorization as conditioned.

10. This order is issued pursuant to Section 0.261 of the Commission's rules on delegations of authority, 47 C.F.R. § 0.261, and is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

Fern J. Jarmulnek
Deputy Chief
Satellite Division
International Bureau

[23] *See, e.g.*, Satellite Transponder Leasing Corp., 5 FCC Rcd 1651, 1652 (Com. Car. Bur. 1990) and American Satellite Company, 5 FCC Rcd 1186, 1189 (Com. Car. Bur. 1990) (Bureau declined to impose coordination conditions where no insurmountable coordination issues were raised).